Operator's Manual for:

NUVL855RM24

Under-Vehicle Lift®

Public Use Wheelchair Lifts

DOT — Public Use Lift

"DOT — Public Use Lift" verifies that this platform lift meets the "public use lift" requirements of FMVSS No. 403. This lift may be installed on all vehicles appropriate for the size and weight of the lift, but must be installed on buses, school buses, and multipurpose passenger vehicles other than motor homes with a gross vehicle weight rating (GVWR) that exceeds 4,536 kg (10,000 lb).





Read manual before operating lift. Failure to do so may result in serious bodily injury and/or property damage. Keep manual in lift storage pouch.

34407 October 2007

SERIES

BRAUN

Braun UVL Series.

Congratulations

We at The Braun Corporation wish to express our fullest appreciation on your new purchase. With you in mind, our skilled craftsmen have designed and assembled the finest lift available.

This manual includes safety precautions, lift operating instructions, manual operating instructions, and instructions for maintenance and lubrication procedures.

Your lift is built for dependability, and will bring you years of pleasure and independence, as long as maintenance is performed regularly and the lift is operated by an instructed person.

Sincerely,

THE BRAUN CORPORATION

Rall W. Brown

Ralph W. Braun

Chief Executive Officer

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Warranty and Registration Instructions

Immediately upon receiving your lift, examine the unit for any damage. Notify the carrier at once with any claims.

Two warranty/registration cards (shown below) are protected in a clear envelope and attached to the lift protective shipping wrap. The sales representative must process one of the cards. The

consumer must fill out the other card and mail it to The Braun Corporation. The warranty is provided on the back cover of this manual. The warranty cards must be processed to activate the warranty.

Two Braun Serial No./Series No. identification tags are posted on the lift. One I.D. tag (shown below) is located on the left platform side

plate (outboard end). A second I.D. tag is located on the base of the pump module. This I.D. tag contains the product identification information provided on the Warranty/Registration card. Record the information in the space provided on the next page. This information must be provided when filing a warranty claim or ordering parts.

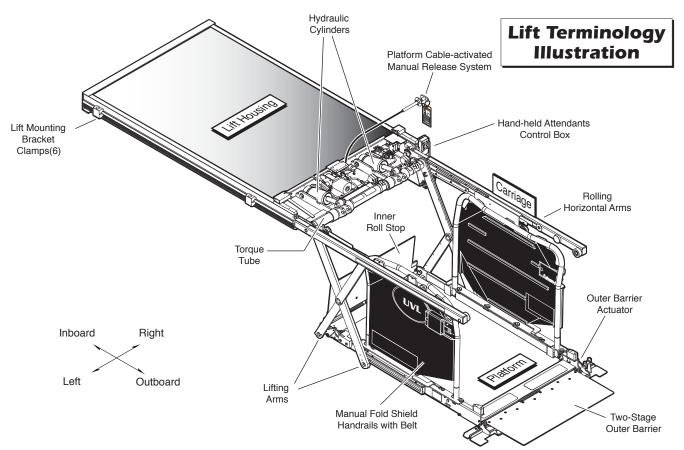


Sample Warranty/Registration Card Sample Serial No./Series No. Identification Tag



Warranty and Registration Instructions

Model No	Serial No.	Note: This information must
Series No		be provided when filing a warranty claim or ordering parts. Keep for future use.



Introduction:

Braun NUVL Series lifts are ADA compliant and comply fully with National Highway Traffic Safety Administration (NHTSA) specifications. The NUVL855RM24 is commercial oriented (intended for operation by an attendant).

Public Use NUVL lift models provide fully automatic operation of deploy (extend), up, down and stow (retract) lift functions. The NUVL855RM24 can be interfaced for fully automatic operation of the power door system. Manual operating procedures are required for the shield handrails and interlocking belt.

Refer to the Lift Terminology Illustration for identification of lift components.

Basic lift operation procedures are identical for all NUVL Series lift models. The operating instructions contained in this manual address the lift control switches and the corresponding lift functions. Operating procedures for the shield handrails and interlocking belt are provided. Instructions are provided for manual operation of the lift in event of power or equipment failure.

Terminology: Become familiar with the terminology that will be used throughout this manual. Become familiar with the identification of lift components and their functions. Contact your lift sales representative or call The Braun Corporation at 1-800-THE LIFT® if any of this information is not fully understood.

Direction: The terms "left," "right," "inboard," and "outboard" will be used throughout this manual to indicate direction (as viewed from outside the vehicle looking directly at the lift). Refer to the Lift Terminology Illustration for clarification of direction terms.

Lift Components

Refer to the Lift Terminology Illustration on page 4.

Pump Module: The remote mounted pump module consists of the main hydraulic pump, the manual hand pump, the logic control board and other electrical components that power the lift electric/hydraulic systems.

Hand-held Pendant Con-

trol: The hand-held pendant is equipped with four push button switches, (DOOR, STOW, DOWN and UP). The momentary switches activate the automatic lift functions. Simply press the switch labled for the intended function. The lift function labels illuminate to identify the function(s). Details

regarding the control switches and their functions are provided in the Lift Operation section.

Lift Housing: The lift housing is the metal structure (casing) mounted under the vehicle which contains and protects the platform carriage assembly. The housing contains all lift components except the power (pump) module when the lift is in the stowed position.

Platform Carriage Assembly:

The platform carriage assembly includes the platform assembly, the lifting arms, the rolling horizontal arms that carry the platform assembly in and out of the housing and the electrical/hydraulic drive components that power the lift.

Platform Assembly: The lift platform assembly consists of the flat aluminum plate upon which the wheelchair is positioned, the outer barriers, the inner roll stop and shield handrails.

Outer Barrier: The two-stage outer barrier system consists of a spring-loaded tall barrier and an electric actuator-driven short barrier. The two-stage outer barrier provides a ramp for wheelchair loading and unloading at ground level. Photos and further details are provided in the Operation Notes and Details section (pages 18-21).

Inner Roll Stop: The NUV-L855RM24 is equipped with an automatic inner roll stop that also serves as the bridge plate. The

inner roll stop bridges the gap between the lift platform and the vehicle floor. The inner roll stop automatically rotates from the horizontal position to the vertical position as the lift lowers and raises. Further details regarding the automatic mechanical inner roll stop are provided on pages 17 and 18.

Platform Cable-activated Manual Release System: A cable-activated manual release system releases the platform carriage assembly drive chain to allow the platform carriage assembly to be manually moved out (extended) or moved in (retracted), should it be necessary. Complete details and operating procedures are provided on page 32.

Vehicle and Lift Interlocks

Braun Corporation NUVL Series lifts comply fully with all NHTSA vehicle and lift interlock specifications. Vehicle movement is prohibited unless the lift is fully stowed and the lift will not function unless the vehicle is parked and secured.

The NUVL855RM24 features a visible and audible threshold warning system that will activate if the threshold area is occupied when the platform is one inch or more below floor level.

The inner roll stop and outer barriers sense weight to prohibit lift operation. The lift will not function if the inner roll stop or outer barriers are occupied. The lift platform

cannot be stowed if occupied.

The lift platform cannot be raised or lowered unless the roll stop and outer barriers are deployed (up).

Lift Actions and Functions:

Deploy (Extend): Lift deployment is the action of the lift platform carriage assembly extending (moving outward) from the housing and lowering to ground level when the DOWN switch is activated or raising to floor level when the UP switch is activated.

Stow (Retract): Stow is the action of the lift platform and carriage assembly retracting (moving inward) into the lift housing. During the stow function, the platform will automatically raise or lower to stow level before retracting into the housing.

DOWN - Platform Lower: Down is the action of the platform lowering from stow or floor level posi-

tion to fully-lowered (ground level) position when the DOWN switch is pressed.

DOWN - Outer Barrier Unfold (Down) - When the platform reaches the fully-lowered (ground) position and the DOWN switch is continued to be pressed, the outer barriers rotate downward from vertical position to ramp position.

UP - Outer Barrier Fold (Raise): From ground level, the UP function automatically raises (rotates) the actuator activated outer barriers to the upright (vertical) position before the platform raises.

UP - Platform Raise: Up is the action of the platform raising from stow level or ground level to floor

level (fully-raised) position when the UP switch is pressed. When the lift is fully lowered, pressing the UP switch first raises the outer barrier.

Note: The lift platform will not raise if the outer barriers are not in the upright (vertical) position. This is a built in safety feature.

Stow Level: Stow level is the height that the platform and carriage assembly moves in and moves out of the lift housing.

Floor Level: Floor level is the height that the platfom and carriage assembly raises to in order for the wheelchair passenger to enter and exit the vehicle (fully raised position).

Safety Symbols

SAFETY FIRST! Know That....

All information contained in this manual and supplements (if included), is provided for your safety. Familiarity with proper operation instructions as well as proper maintenance procedures are necessary to ensure safe, troublefree operation. Safety precautions are provided to identify potentially hazardous situations and provide instruction on how to avoid them.



AWARNING

This symbol indicates important safety information regarding a potentially hazardous situation that could result in serious bodily injury and/or property damage.



ACAUTION

This symbol indicates important information regarding how to avoid a hazardous situation that could result in minor personal injury or property damage.

D

Note: Additional information provided to help clarify or detail a specific subject.

These symbols will appear throughout this manual as well as on the labels posted on your lift. **Recognize** the seriousness of this information.

Lift Operation Safety Precautions

AWARNING

If the lift operating instructions, manual operating instructions and/or lift operation safety precautions are not fully understood, contact The Braun Corporation immediately. Failure to do so may result in serious bodily injury and/or property damage.

▲WARNING

Read manual and supplement(s) before operating lift. Read and become familiar with all safety precautions, lift operation notes and details, operating instructions and manual operating instructions before operating the lift. **Note:** Wheelchair passengers and all transit agency personnel (drivers and wheelchair lift attendants) must read and become familiar with the contents of this manual and supplement(s) before operation.

▲WARNING

Load and unload on level surface only.

▲WARNING

Engage vehicle parking brake before operating lift.

▲WARNING

Provide adequate clearance outside the vehicle to accommodate the lift before opening lift door(s) or operating lift.

▲WARNING

Inspect lift before operation. Do not operate lift if you suspect lift damage, wear or any

abnormal condition.

▲WARNING

Keep operator and bystanders clear of area in which the lift operates.

AWARNING Whenever a wheelchair passenger (or standee) is on the platform, the:

· Handrail belt must be latched.

Passenger must be positioned in the center of the platform.

· Wheelchair brakes must be locked

Inner roll stop and outer barriers must be up (vertical)

• Passenger should grip both handrails (if able).

AWARNING Load and unload clear of vehicular traffic.

AWARNING Do not overload or abuse. The load rating applies to both the raising and lowering func-

tions - continuous lifting capacity is 700 lbs.

AWARNING Discontinue lift use immediately if any lift or vehicle interlock does not operate properly.

AWARNING Do not operate or board the lift if you or your lift operator are intoxicated.

AWARNING Do not raise front wheelchair wheels (pull wheelie) when loading (boarding) the platform.

AWARNING Open lift door(s) fully and secure before operating lift.

AWARNING Position and secure (buckle, engage, fasten, etc.) the wheelchair-equipped occupant

seat belt (torso restraint) before loading onto the wheelchair lift platform.

AWARNING Fold outer barrier and handrails down to platform before stowing lift.

Lift Operation Safety Precautions (continued)

AWARNING

If the lift operating instructions, manual operating instructions and/or lift operation safety precautions are not fully understood, contact The Braun Corporation immediately. Failure to do so may result in serious bodily injury and/or property damage.

AWARNING

Lift attendants must ensure that lift occupants keep hands, arms and all other body parts within the lift occupant area and clear of moving parts.

AWARNING

Platform must be positioned at floor level (bridging position) when loading or unloading in and out of vehicle.

AWARNING

Do not use platform inner roll stop or outer barriers as a brake. Stop and brake wheelchair when loading onto the platform (manually stop and brake manual wheelchairs — stop powered wheelchairs with the wheelchair controls).

▲WARNING

Turn powered (electric) wheelchairs off when on lift platform.

▲WARNING

Press the DOWN switch until the entire platform rests on ground level (lowered fully) and the outer barriers are fully unfolded (ramp position) before loading or unloading a passenger at ground level.

▲WARNING

Both outer barriers must be fully unfolded (ramp position) until front and rear wheelchair wheels cross the barriers when loading or unloading at ground level.

AWARNING Accidental activation of control switch(es) may cause unintended operation(s).

AWARNING After manually releasing platform, stow platform and push manual release T-handle in fully

and move platform in and out to engage platform lock before driving vehicle. Failure to

lock platform may result in unintended platform deployment.

AWARNING Insert manual relaese T-handle fully before manually lowering or raising platform and

manually move platform in and out to engage platform lock.

AWARNING Maintenance and lubrication procedures must be performed as specified in this manual by

authorized (certified) service personnel.

AWARNING Replace missing, worn or illegible decals.

AWARNING Keep owner's (operator's) manual in lift vehicle at all times.

AWARNING Never modify (alter) a Braun Corporation lift.

AWARNING Do not use accessory devices not authorized by The Braun Corporation.

AWARNING Do not remove any guards or covers.

Lift Operation Safety Precautions (continued)

AWARNING

If the lift operating instructions, manual operating instructions and/or lift operation safety precautions are not fully understood, contact The Braun Corporation immediately. Failure to do so may result in serious bodily injury and/or property damage.

AWARNING Keep clear of any hydraulic leak.

AWARNING Failure to follow these safety precautions may result in serious bodily injury and/or property damage.

AWARNING

Read and become familiar with all lift operation safety precautions, operation notes and details, operating instructions and manual operating instructions prior to operating the lift. If this information is not fully understood, contact The Braun Corporation immediately. Failure to do so may result in serious bodily injury and/or property damage.

NUVL "Public Use" lift models are specifically designed to be operated by an attendant. The Lift Operating Instructions contained in this manual and appearing on the lift operating instructions decal provide instructions for operation of the lift only. Read and become familiar with all lift operation safety precautions, operation notes and details, operating instructions and manual operating instructions before attempting lift operation procedures.

Lift Access Doors and Interlocks: Attendants must become familiar with the vehicle lift access door system and vehicle interlock system(s). Transit vehicles and lift access door configurations vary. Door securement devices (latches, hooks, cables, etc.) and procedures to operate them vary. Instructions for operation of vehicle interlocks and door securement systems are not addressed in this manual or on lift-posted operating instructions decals due to the variety of procedures required for operating them. Braun Corporation NUVL Series lifts comply fully with all NHTSA vehicle and lift interlock specifications (detailed on pages 18-23). Infringement of any lift interlock will prohibit lift operation.

It is the responsibility of the lift operator (attendant) to properly open, secure and close the vehicle lift door(s), to activate the vehicle interlock(s), to load and unload the wheelchair passenger (or standee) on and off the lift platform, and to properly activate all lift functions.

General Safety: The lift operator (attendant) and bystanders must keep clear of the area in which the lift operates and clear of all moving parts. Lift attendants

must ensure that lift occupants (passengers) keep hands, arms and all other body parts within the lift occupant area and clear of moving parts.

Control Switches

Lift Power ON/OFF Switch:

This switch must be in the ON position in order to activate the lift. The green Power Indicator Light illuminates to signal power to the lift.

Hand-held Pendant Control:

The hand-held attendent's pendant control is equipped with four push button switches (DOOR, STOW, DOWN and UP). The momentary switches activate the automatic lift func-

tions. Simply press the switch labeled for the intended function. When there is power to the lift, the lift function labels illuminate to identify the functions.



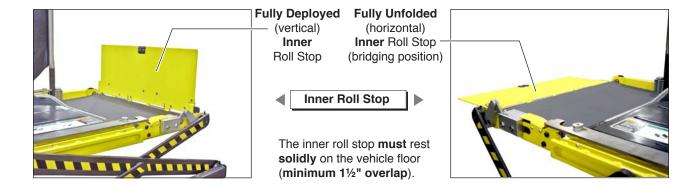
Hand-held Pendant

Lift Features

Inner Roll Stop: The NUV-L855RM24 is equipped with an automatic inner roll stop that also serves as a bridge plate. The spring loaded inner roll stop automatically deploys (rotates) to the

vertical position when the platform extends from the stow position.

When the UP switch is pressed and the platform raises to floor level, this mechanical roll stop is automatically rotated to the bridging (horizontal) position to provide a bridge plate between the platform and the vehicle floor. The inner roll stop **must** rest **solidly** on the vehicle floor (**minimum** 1½" **overlap**). The roll stop automatically deploys (rotates) to the vertical (roll stop) position as the platform lowers (DOWN switch is pressed).



AWARNING

Discontinue lift use immediately if any lift component does not operate properly. Failure to do so may result in serious bodily injury and/or property damage.

The inner roll stop automatically folds down to the platform surface (horizontal) during the stow function (as platform retracts).

Interlock Feature: The inner roll stop senses weight (pressure) to prohibit lift operation. The lift will not function if the inner roll stop is occupied.

Discontinue lift operation immediately if the inner roll stop does not operate properly.

Outer Barrier: The two-stage outer barrier provides a ramp for wheelchair loading and unloading at ground level (see photos on following page). When the platform lowers fully to ground level, the electric actuator unfolds (rotates) the barriers to the ramp position (fully unfolded).

The tall outer barrier is spring loaded but driven by the electric actuator-powered short outer barrier to rotate from the ramp (horizontal) position to the deployed (vertical) position.

Note: The tall outer barrier must be manually raised and lowered

from the platform surface when extending and retracting the platform. Details are provided on pages 20 and 21.

Although the outer barriers are lift-powered, the activation of the barriers are controlled by the lift operator (attendant). Pressing the DOWN switch unfolds the barriers. The actuator-powered two-stage outer barriers fold (rotate) to the vertical position when the UP swiitch is pressed.

Note: The lift platform will not raise if the outer barriers are not fully deployed (up).

Interlock Features: The outer barriers sense weight to prohibit lift operation. The lift will not function if the outer barriers are

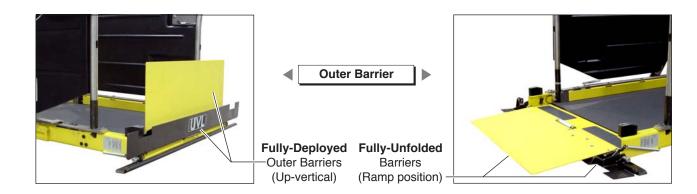
occupied. Lift platform movement shall be interrupted unless the outer barrier is fully deployed (up).

The attendant **must view** the platform as it lowers to **be certain** the **entire platform** reaches and rests safely on the ground. Stop pressing the DOWN switch if any

portion of the platform is obstructed while descending or the entire platform does not reach ground level **for any reason** (contact with an obstruction, mechanical failure, exceeding the lift "floor-toground" capacity, etc.). After the platform is fully lowered, the attendant should continue to press the DOWN switch to unfold the

outer barrier fully (ramp poition).

Note: The barrier must be fully unfolded until the entire wheelchair (or standee) has crosed the barrier when loading or unloading at ground level. Discontinue lift operation immediately if the outer barriers do not operate properly.



Barrier, Handrail and Belt Manual Operation

The folding handrails and tall outer barrier are manually operated. The spring-loaded outer barrier (tall barrier) and the handrails rest on the platform when the lift is not in use. The outer barrier **must** be raised to the vertical position and the handrails **must** be lifted to the vertical position whenever a passenger is on the platform.

The tall outer barrier and the handrails **must** be folded down to the platform (horizontal) position **before stowing** the lift. The handrails fold down onto the outer barrier to secure the barrier in the horizontal position. Each handrail is secured with a latch handle.

The latch handles must be lifted before the handrails can be folded or unfolded and must be lowered after folding or unfolding the handrails.

Interlocking Handrail Belt: The NUVL855RM24 is equipped with an interlocking handrail belt. Once the lift platform has extended fully from the stowed position, the belt must be latched in order to raise or lower the platform. During the Stow function, the belt must be unfastened after the platform raises or lowers to stow level and stops. With the belt unlatched, pressing the STOW switch then retracts the platform fully.

AWARNING

Before stowing lift:

- Lower outer barrier down to platform.
- Lower handrails down to platform.
- Lower latch handles down to platform.

Failure to follow these precautions may result in serious bodily injury and/or property damage.

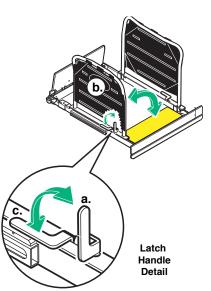
Refer to the procedures on the following page for operation of the barrier and handrails.

Handrail Operating Instructions

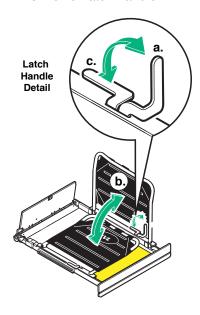
- **1.** Fold tall (yellow) outer barrier down.

Note: Order of procedures shown is for stowing lift. To deploy handrails and barrier after extending the platform, reverse order of procedures.

- 2. a. Lift latch handle.
 - **b.** Deploy / Stow handrail.
 - c. Lower latch handle.



- 3. a. Lift latch handle.
 - **b.** Deploy / Stow handrail.
 - c. Lower latch handle.



Lift Passengers

If you are an attendant operating the lift, it is your responsibility to perform safe loading and unloading procedures. Wheelchair lift attendants should be instructed on any special needs and/or procedures required for safe transport of wheelchair passengers.

The lift operator and bystanders must keep clear of the area in which the lift operates. Observe your passenger at all times during lift operation.

Do not attempt to load or unload a passenger in a wheelchair or other apparatus that does not fit on the platform area. Do not exceed the 700 pound load capacity of the lift. The lift attendant should not ride on the platform with the passenger.

Passenger Orientation (Boarding Direction): Braun "Public Use" NUVL Series wheelchair lifts accommodate both inboard and outboard facing wheelchair passengers or standees. Inboard facing of wheelchair lift passengers is not prohibited, but outboard facing of passengers is recommended by The Braun Corporation.

Braun "Public Use" NUVL Series lifts permit both inboard and outboard facing of wheelchair and mobility aid users **and** accommodate persons using walkers, crutches, canes or braces or who otherwise have difficulty using steps.

Standees: Lift Operating Instructions apply to wheelchair passengers and standees. Standees should stand in the center of the platform (**fully inside the yellow boundaries**) and grip both handrails (if able) when on platform.

Yellow Boundaries: The passenger must be positioned in the center of the platform to prevent side-to-side load imbalance. The lift attendant (operator) should **not** ride on the platform with the passenger.

Yellow platform loading boundaries are identified in the following manner. The yellow powdercoated inner roll stop and tall outer barrier identify the inboard and outboard ends of the platform.

Platform side plates and handrail bases are powder coated yellow also.

parts within the lift occupant area and clear of all moving parts.

Threshold Warning: The vehicle -mounted black threshold warning mats identify the platform threshold area. Interlock: A visible and audible threshold warning system will activate if the threshold area is occupied when the platform is one inch or more below floor level.

The attendant must always be certain the wheelchair passenger or standee is properly positioned on the platform (fully inside yellow boundaries) and the wheelchair brakes are locked when a passenger is on the lift platform. The lift passenger must keep hands, arms and all other body

Vehicle (Floor Level) Loading and Unloading: The platform must be fully raised (at floor level) and the inner roll stop must be properly positioned when loading or unloading passengers in or out of the vehicle. It is the responsibility of the lift attendant to ensure the platform and the inner roll stop are properly positioned at floor level when loading and unloading passengers.

The wheelchair brakes must be locked, the outer barriers must be in the fully-deployed (up) position and the handrail belt must be latched whenever a passenger is on the platform.

AWARNING

Whenever a passenger is on the platform, the:

- Handrail belt must be latched
- Passenger must be positioned in the center of the platform.
- Wheelchair brakes must be locked
- Inner roll stop and outer barriers must be UP

Failure to follow these rules may result in serious bodily injury and/or property damage.

Lift Passengers

Do not use the outer barriers as a brake. Stop and brake the wheelchair when fully loaded on the platform. Manually stop and brake manual wheelchairs. Stop powered wheelchairs

AWARNING

Discontinue lift use immediately if any lift component does not operate properly. Failure to do so may result in serious bodily injury and/or property damage.

with the wheelchair controls. Turn powered (electric) wheelchairs off when on the platform.

If the outer barriers, inner roll stop, handrails, handrail belt or any other lift component does not operate as outlined in this manual, **discontinue lift use immediately** and contact The Braun Corporation sales representative in your area or call The Braun Corporation at 1-800-THE LIFT®. One of our national Product Support representatives will direct you to an authorized service technician who will inspect your lift.

Wheelchair-Equipped Occupant Seat Belts

The Braun Corporation recommends wheelchair passengers position and buckle their wheelchair-equipped seat belt (torso restraint) **before** loading onto a wheelchair lift.

Different types of disabilities require different types of wheelchairs and different types of wheelchair-equipped occupant restraint belt systems (torso restraints). It is the responsibility of the wheelchair passenger to have his or her wheelchair equipped with an occupant restraint (seat belt) under the direction of their health care professional.

Wheelchair lift attendants should be instructed on any special needs and/or procedures required for safe transport of wheelchair passengers.

AWARNING

Position and secure (buckle, engage, fasten, etc.) the wheelchair-equipped occupant seat belt before loading onto the wheelchair lift platform. Failure to do so may result in serious bodily injury and/or property damage.

Operation Procedure Review

The Braun Corporation recommends that transit agency supervisors and wheelchair lift attendants review the safety precautions and operation procedures appearing in this manual and on lift operating instruction decals with your wheelchair lift sales representative (dealer), **before** attempting lift operation.

Any questions or concerns can be answered by the sales representative at that time. Operate the lift through all functions with your sales representative on hand to ensure the proper use and operation of the wheelchair lift is understood. Transit agency supervisors should train and educate their lift attendants on the proper use and operation of the wheelchair lift if it is not possible for the attendants to review the safety precautions and operation procedures with the wheelchair lift sales representative.

The lift operator's manual must be stored in the lift vehicle at all times.

Preventive Maintenance:

Maintenance is necessary to ensure safe and troublefree lift operation. General preventive lift maintenance consisting of **careful** inspections of the lift system and cleaning the lift should be a part of your transit agency's daily lift service program. Simple inspections can detect potential lift operational problems.

Keeping the lift platform and housing area clean is one of the most effective preventive maintenance practices to exercise. Dirt, mud, snow, ice and other debris entering the housing could result in potential lift problems.

Regular preventive maintenance will reduce potential lift operation downtime and increase the service life of the lift, as well as possibly detecting potential hazards. Exposure to harsh weather elements, environmental conditions, or heavy usage may require more frequent maintenance and lubrication procedures.

Preventive maintenance visual inspections **do not** take the place of the procedures specified in the Maintenance and Lubrication Schedule provided on pages 40-48 of this manual. Refer to the Maintenance and Lubrication section for further details.

AWARNING

Maintenance and lubrication procedures must be performed by authorized service personnel as specified in this manual. Failure to do so may result in serious bodily injury and/or property damage.

Lift Operating Instructions

AWARNING

Whenever a passenger is on the platform, the:

- Handrail belt must be latched
- Passenger must be positioned in the center of the platform.
- Wheelchair brakes must be locked
- Inner roll stop and outer barriers must be UP

Failure to follow these rules may result in serious bodily injury and/or property damage.

AWARNING

Read and become familiar with all lift operation safety precautions, operation notes and details, operating instructions and manual operating instructions prior to operating the lift. If this information is not fully understood. contact The Braun Corporation immediately. Failure to do so may result in serious bodily injury and/or property damage.

Before lift operation, park the vehicle on a level surface, away from vehicular traffic. Place the vehicle transmission in "Park" and engage the parking brake.

Instructions and procedures are applicable for the NUVL855RM24. Warnings and Lift Operating Instructions decal 34270 provides lift operating instructions. Replace any missing, worn or illegible decals.

If your lift does not function as intended or a visual or audible warning signal is activated, review the NHTSA Operations Checklist on page 30. Follow the Manual Operating Instructions on pages 31-35 in the event of a power or equipment failure.

Lift Operating Instructions

OPEN DOOR(S) AND SECURE

TO DEPLOY PLATFORM:

- **1. Stand clear** and press the UP switch until the platform extends **fully**. Release switch.
- 2. Lift handrail latch handles, deploy (lift) handrails up to vertical position and lower handrail latch handles fully.
- **3.** Lift outer barrier to vertical position.
- 4. Latch handrail belt.
- **5.** Press the UP switch until the platform stops (raises to **floor level**) and inner roll stop unfolds to floor level. Release switch.

TO UNLOAD PASSENGER:

 Read Note below! Load passenger onto platform and lock wheelchair brakes.

Note: Passenger must be positioned fully inside yellow boundaries, outer barrier must be UP and handrail belt must be latched.

- 2. Press DOWN switch until the **entire** platform reaches ground level and the outer barrier **unfolds fully** (ramp position). Release switch.
- **3**. Unlatch handrail belt, unlock wheelchair brakes and unload passenger from platform.

Note: Outer barrier **must** be **fully unfolded** (ramp position) until the entire wheelchair (or standee) has crossed the outer barrier.

Lift Operating Instructions

TO LOAD PASSENGER:

 Read Notes below! Load passenger onto platform, lock wheelchair brakes and latch handrail belt.

Note: Outer barrier **must** be **fully unfolded** (ramp position) until the entire wheelchair (or standee) has crossed the outer barrier.

Note: Passenger **must** be positioned **fully inside yellow boundaries**.

- 2. Press UP switch to fold outer barrier UP **fully** (vertical), raise the platform to **floor level** and unfold inner roll stop to **floor level**. Release switch.
- **3**. Unlock wheelchair brakes and unload passenger from platform.

TO STOW PLATFORM:

- 1. Latch handrail belt.
- 2. Press STOW switch until platform stops at **stow** level. Release switch.
- 3. Unlatch handrail belt.
- **4.** Fold outer barrier down to platform (horizontal) position.
- **5.** Lift handrail latch handles, stow (fold) handrails down to platform (horizontal) position and lower handrail latch handles fully.
- **6.** Press STOW switch until platform stops (retracts **fully**). Release switch.

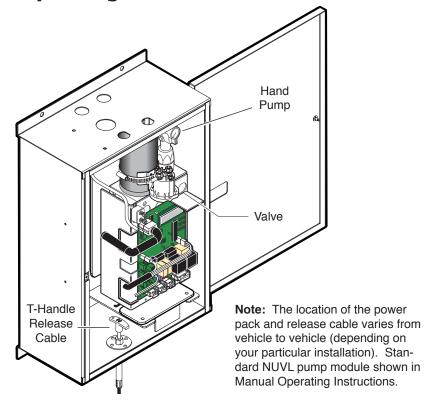
CLOSE DOOR(S)

NHTSA Operations Checklist

The following energtions have been verified upon	D Di-#	
The following operations have been verified upon installation. This operational checklist can be used	 ☐ Platform movement is prohibited beyond the position where the inner roll stop is fully deployed (up). ☐ Lift platform movement shall be interrupted unless the outer barrier is deployed (up). 	▲ WARNING
at any time to verify the lift is fully functional. Verified: Vehicle movement is prevented unless the lift door is closed, ensuring the lift is stowed. Lift operation shall be prevented unless the vehicle is stopped and vehicle movement is prevented. The platform will not fold/stow if occupied.		Discontinue lift use immediately if any lift or vehicle interlock does not operate properly. Failure to do so may result in serious bodily injury and/or property damage.
☐ The inner roll stop will not raise if occupied.		
☐ Verify platform lighting when lift is deployed and pendant illumination when lift is powered.	Public use vehicle man	nufacturers are responsible
☐ The outer barrier will not raise if occupied.	for complying with the lift lighting requirements in Federal Motor Vehicle Safety Standard No. 404, Platform Lift Installations in Motor Vehicles (49 CFF 571.404).	
A visual and audible warning will activate if the threshold area is occupied when the platform is at least one inch below floor level.		

In event of power or equipment failure, refer to the Manual Operating Instructions to manually operate the lift. Step-by-step procedures are provided on pages 34 and 35. Refer to the Lift Operating Instructions for all normal lift operation procedures (such as loading and unloading passengers). Follow all Lift Operation Safety Precautions at all times!

Familiarize yourself with the components necessary to manually operate the lift. The T-handle release cable releases and engages the lift platform to allow the platform to be manually extended and retracted (details on Pages 32 and 33). The manual back-up pump (hand pump) is used to manually lower and raise the extended platform (see Page 33).



Cable-Activated Platform Manual Release System

Platform Manual Release System: A cable-activated manual release system releases and engages the platform carriage assembly drive chain to allow the platform carriage assembly to be manually moved out (extended) or moved in (retracted) as needed. A T-handle is provided on the release cable for activation of the manual release system (details follow).

After manually moving the platform in or out, it is extremely important that the cable-activated manual release is positively re-engaged to secure (lock) the platform carriage assembly before loading a passenger on the platform or before driving the vehicle.

Grasp the outer barrier and move the platform in and out until the

platform locks (chain release assembly engages), securing the platform carriage assembly within the housing. You will feel the release mechanism engage.

Failure to manually lock the platform carriage assembly (re-engage the carriage assembly drive chain) after manual deployment, will allow the platform to roll in or out of housing unhindered during vehicle movement. Failure to lock the platform will also allow the platform to roll in or out of housing unhindered during hand pump raising and lowering procedures.

After manually releasing platform, push manual release T-handle in fully and ensure platform is locked before driving lift vehicle. Uncontrolled and



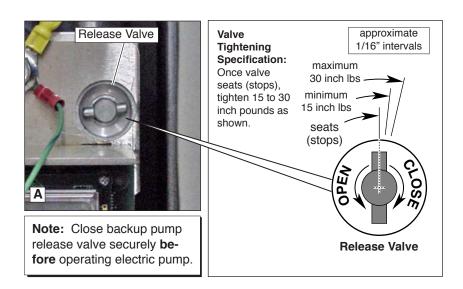
unintentional platform deployment (inadvertent platform ejection) may result in serious bodily injury and/or property damage.

Note: The lift platform must be pushed back into its carriage compartment all the way before reverting back to normal (powered) operation. When the lift is fully extended manually, it does not activate the proper switches for normal operation. Returning (moving) the lift in fully allows for proper switch activation.

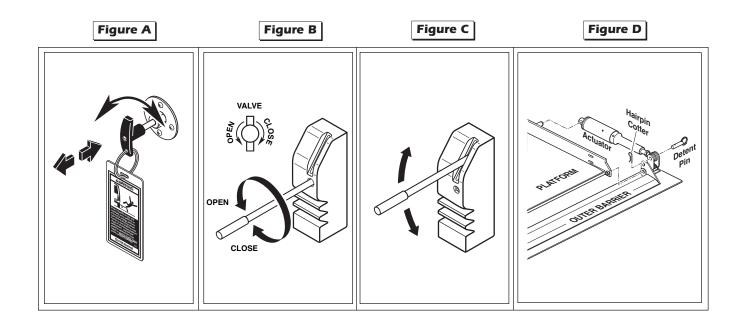
If you experience power or equipment failure, refer to the Manual Operating Instructions to operate the lift. Instructions and illustrations are provided for all steps that differ from standard lift operation procedures. Manual Instructions Decal 31409 (posted in pump module box) provides manual operating instructions also.

Manual Hand Pump

The manual hand pump is used to lower and raise the platform and outer barrier.



Refer to Figures A-C for the Manual Operating Instructions on page 35.



Manual Operating Instructions

OUT (To Extend Platform):

- 1. Pull T-Handle (see Figure A).
- 2. Turn T-Handle to lock platform in released position.
- 3. Pull platform out.
- 4. Turn T-Handle.
- 5. Push T-Handle in.
- 6. Turn T-Handle to lock platform in engaged position.

DOWN (To Lower Platform):

Using hand pump handle, open hand pump valve (turn counter-clockwise). See Figure B. Open 1/2 turn only.

DOWN (Unfold Outer Barrier):

- Remove hairpin cotter from detent pin (see Figure D).
- 2. Remove detent pin.
- 3. Unfold (rotate) barrier down.

UP (To Fold Outer Barrier):

- 1. Fold (rotate) barrier up.
- 2. Insert detent pin.
- 3. Insert hairpin cotter in detent pin.

UP (To Raise Platform):

Using hand pump handle:

- Close hand pump valve (turn clockwise).
- Insert handle in pump and stroke. See Figure C.

IN (To Stow Platform):

- Raise or lower platform to stow level (follow UP or DOWN procedures).
- 2. Pull T-Handle.
- 3. Turn T-Handle to lock platform in released position.
- 4. Push platform in.
- 5. Turn T-Handle.
- 6. Push T-Handle in.
- Turn T-Handle to lock platform in engaged position.

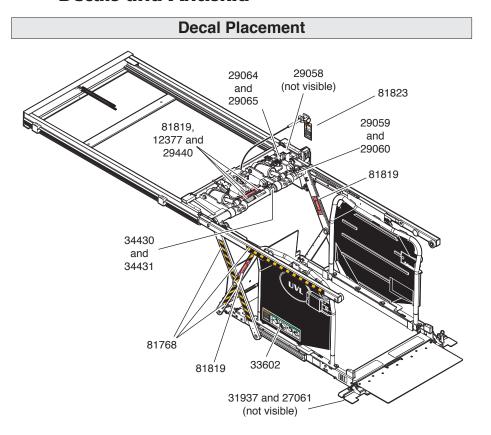
Note: Close valve before operating electric pump.

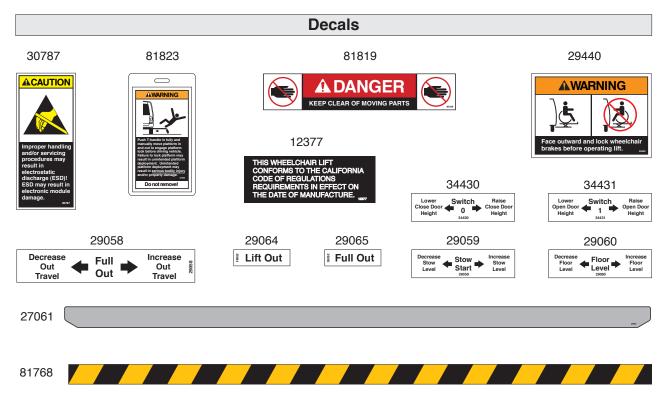
AWARNING

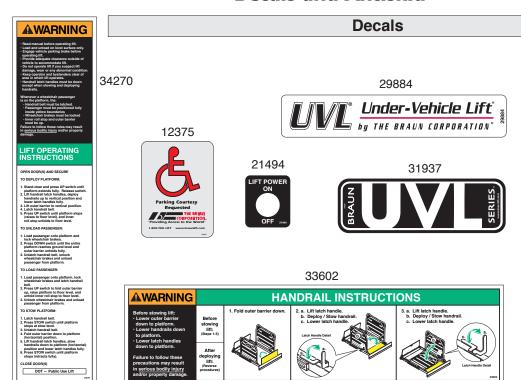
Replace missing, worn or illegible decals. Failure to do so may result in serious bodily injury and/or property damage.

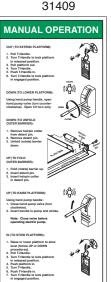
The lift is only as safe as the operator. Replace any missing, worn or illegible decals! Part numbers are provided for decals. Inspect your lift for missing, worn or illegible decals. Call 1-800-THE LIFT® for replacements.

Note: Clean surfaces as detailed on page 37 before posting decals.









DOT — Public Use Lift

Anitskid

AWARNING

Replace missing or worn antiskid.
Failure to do so may result in serious bodily injury and/or property damage.

Inspect your lift for any missing or worn antiskid. Order as needed. **Note:** Clean surfaces with isopropyl alcohol before decal or antiskid application. Use a clean cloth or paper towels. **Do not** use oily shop rags. Wipe surface free of residue with dry portion of cleaning cloth.

Available Antiskid		
Size	Color	Part No.
2" x 12"	Black	#24172-BK
2" x 12"	Yellow	#24172-YL
3" x 8"	Black	#31188-BK
3" x 12"	Black	#24173-BK
3" x 12"	Yellow	#24173-YL
6" x 12"	Black	#24174-BK
6" x 12"	Yellow	#24174-YL

Maintenance and Lubrication

Proper maintenance is necessary to ensure safe, troublefree operation. Inspecting the lift for any wear, damage or other abnormal conditions should be a part of all transit agencies's daily service program. Simple inspections can detect potential problems. The maintenance and lubrication procedures specified in the following schedule **must** be performed by a Braun authorized service representative at the scheduled intervals according to the number of cycles. NHTSA NUVL Series lifts are equipped with a cycle counter (digital display built into the electronic control board).

NUVL Series lifts are equipped with hardened pins and self-lubricating bushings to decrease wear, provide smooth operation and extend the service life of the lift.

When servicing the lift at the recommended intervals, inspection and lubrication procedures specified in the previous sections should be repeated. Clean the components and the surrounding area before applying lubricants. LPS2 General Pur-

pose Penetrating Oil is recommended where Light Oil is called out. Use of improper lubricants can attract dirt or other contaminants which could result in wear or damage to the components. Platform components exposed to contaminants when lowered to the ground may require extra attention.

AWARNING

Maintenance and lubrication procedures must be performed as specified by an authorized service technician. Failure to do so may result in serious bodily injury and/or property damage.

Lift components requiring grease are lubricated during assembly procedures. When these components are replaced, grease must be applied during installation procedures. Specified lubricants are available from The Braun Corporation (part numbers provided on page 41).

Maintenance and Lubrication

All listed inspection, lubrication and maintenance procedures should be repeated at "750 cycle" intervals following the scheduled "4500 Cycles" maintenance. These intervals are a general guideline for scheduling maintenance procedures and will vary according to lift use and conditions. Lifts exposed to severe conditions (weather, environment, contamination, heavy usage, etc.) may require inspection and maintenance procedures to be performed more often than specified.

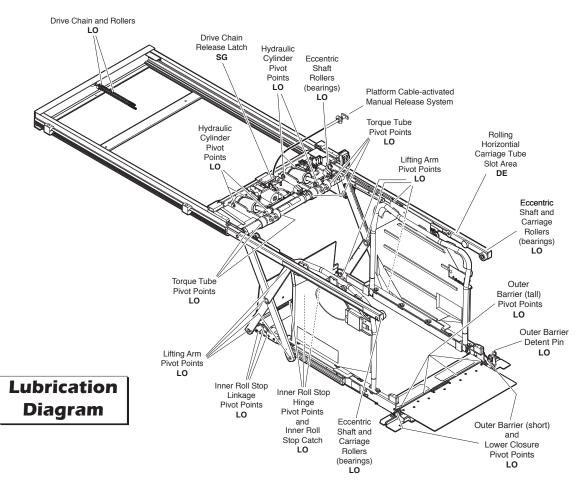
Maintenance Indicator: The Lift Ready green LED, mounted on the hand-held pendant storage bracket, will change color to yellow after every 750 cycles. The yellow LED will not affect the functions of the lift, but is a reminder to complete

necessary maintenance and lubrication procedures. Once the lift has been serviced, press the CYCLE button (located below LCD display on the control board) until the Lift Ready LED changes back to green. The CYCLE button also clears the lift cycle count (since last service) but not the lifetime cycle count.

Discontinue lift use immediately if maintenance and lubrication procedures are not properly performed, or if there is any sign of wear, damage or improper operation. Contact your sales representative or call The Braun Corporation at 1-800-THE LIFT®. One of our national Product Support representatives will direct you to an authorized service technician who will inspect your lift.

See the Maintenance/Lubrication Schedule for recommended applications per number of cycles.

Lubricant	Туре	Specified (recommended) Lubricant	Available Amount	Braun Part No.
LO - Light Oil	Light Penetrating Oil (30 weight or equivalent)	LPS2, General Purpose Penetrating Oil	11 oz. Aerosol Can	15807
DE - Door-Ease	Stainless Stick Style (tube)	Door-Ease Stick (tube)	1.68 oz.	15806
SG - Synthetic Grease	Synthetic Grease (Multipurpose)	Mobiltemp SHC32	12.5 oz. Tube	28598



	Outer barrier and lower closure pivot points (2)	Apply Light Oil - See Lubrication Diagram
	Outer barrier detent pin pivot points (2)	Apply Light Oil - See Lubrication Diagram
	Inner roll stop hinge pivot points	Apply Light Oil - See Lubrication Diagram
	Inner roll stop linkage pivot points	Apply Light Oil - See Lubrication Diagram
	Lifting arm center and platform pivot points (bearings at all points)	Apply Light Oil - See Lubrication Diagram
750	Inspect outer barrier and lower closure for proper operation	Correct or replace damaged parts.
Cycles	Inspect outer barrier seal and lower closure gasket	Resecure, replace or correct as needed
	Inspect outer barrier detent pin hairpin cotter	Ensure hairrpin cotter is present and can be removed and inserted easily. Resecure, replace or correct as needed.
	Inspect lift for wear, damage or any abnormal condition	Correct as needed.
	Inspect lift for rattles	Correct as needed.
	Check drive chain tension.	Pull out and lock manual release cable. Adjust chain tension as needed. See Drive Chain Adjustment.

	Inspect inner roll stop and linkage for: Proper operation. Roll stop should rest solidly on floor providing smooth transition. Positive securement Wear or damage	Resecure, replace or correct as needed. See Inner Roll Stop Adjustment Instructions.
	Check carriage ride height in housing	Adjust as needed. See Carriage Ride Height Adjustment.
750 Cycles	Check stow height/lifting arm alignment	Lifting arms should be horizontal, aligned with each other and aligned with carriage. Adjust as needed. See Switch Adjustment (Below Stow Switch).
	Inspect wiring harnesses for securement, wear or other damage	Resecure, replace or correct as needed
	Check lower pan securement	Resecure, replace damaged parts or correct as needed.
	Torque tube pivot bearings (4 places)	Apply Light Oil - See Lubrication Diagram

	Perform all procedures listed in previous section also	
1500 Cycles	Carriage and eccentric shaft rollers (bearings)	Apply Light Oil - See Lubrication Diagram

	Lifting arm slots in rolling horizontial carriage arm tubes	Apply Door Ease - See Lubrication Diagram. Apply to the surface area around both slots and wipe off excess
	Hydraulic cylinder pivot points (4 per cylinder)	Apply Light Oil - See Lubrication Diagram
	Drive chain and chain rollers	Apply Light Oil - See Lubrication Diagram
	Drive chain release latch mechanism	Apply Synthetic Grease - See Lubrication Diagram
1500 Cycles	Deploy lift, remove inboard and outboard lower pans and blow out housing. Blow off platform also.	Use compressor and nozzle to remove all debris from housing. Clean outboard lower pan slot and apply Antisieze to slot before reinstalling pan.
	Deploy lift, remove inboard and outboard lower pans and clean housing tracks	Use clean cloth and solvent to clean tracks. Clean outboard lower pan slot and apply Antisieze to slot before reinstalling pan.
	Check drive chain tensioner, jam nuts and connecting link for securement and/or misalignment.	Correct or replace damaged parts and/or relubricate. See Drive Chain Adjustment.
	Inspect drive chain release latch mechanism for proper operation, positive securement, wear or other damage	Correct or replace damaged parts and/or relubricate.

	Inspect platform cable-activated manual release system (T-handle/cable assembly and carriage movement)	Ensure T-handle release and cable assembly operate properly (see Manual Operation). Ensure carriage can be manually extended and retracted freely.
	Inspect limit switches for securement and proper adjustment	Resecure, replace or adjust as needed. See Switch Adjustment.
	Inspect carriage, lifting arm and eccentric shaft rollers (bearings) for wear or damage, positive securement and proper operation	Correct, replace damaged parts and/or relubricate.
1500 Cycles	Inspect external snap rings (e-clips): Carriage roller bearings (4) Lower lifting arm pins (5) Upper lifting arm pins (2) Outer race bearings (2) Inner roll stop shaft (2)	Resecure, replace or correct as needed.
	Inspect lower lifting arm pins for wear or damage, positive securement and proper adjustment	Resecure, replace damaged parts, lubricate or correct as needed.
	Inspect eccentric shaft pins, bearing mounting screw, washers and securement hardware for wear or damage, positive securement and proper operation	Resecure, replace damaged parts, lubricate or correct as needed. See Carriage Ride Height Adjustment.

	Inspect torque tube cams for securement, wear or damage	Resecure, replace or correct as needed.
1500 Cycles	Inspect housing cam brackets for securement, wear or damage	Resecure, replace or correct as needed.
	Inspect cylinder(s), hoses, fittings and hydraulic connections for wear, damage or leaks	Tighten, repair or replace if needed.
	Inspect power cable	Resecure, repair or replace if needed.

	Perform all procedures listed in previous section als	80
	Hydraulic Fluid (Pump) - Check level. Note: Fluid should be changed if there is visible contamination. Inspect the hydraulic system (cylinder, hoses, fittings, seals, etc.) for leaks if fluid level is low.	Use 5606 aviation fluid only (part 87010R-MILL). Check fluid level with platform lowered fully . Fill to within 1-1/2" of the bottom of the fill tube (neck).
4500 Cycles	Inspect lifting arm bushings and pivot pins for visible wear or damage	Replace if needed.
	Inspect outer barrier pivot pin mounting bolts (2)	Tighten or replace if needed
	Mounting	Check to see that the lift is securely anchored to the vehicle and there are no loose bolts, broken welds, or stress fractures.

4500 Cycles	Decals and Antiskid	Replace decals if worn, missing or illegible. Replace antiskid if worn or missing. See Decals and Antiskid section on pages 36-37.
Consecutive 750 Cycle Intervals	Repeat all previously listed inspection, lubrication and maintenance procedures at 750 cycle intervals.	

"Providing Access to the World"



Operator's Manual

NUVL855RM24

Under-Vehicle Lift®

Braun "Worry-Free" Three-Year Limited Warranty

The Braun Corporation of Winamac, Indiana, warrants its wheelchair lift against defects in material and workmanship for three years, providing the lift is operated and maintained properly and in conformity with this manual. This warranty is limited to the original purchaser and does not cover defects in the motor vehicle on which it is installed, or defects in the lift caused by a defect in any part of the motor vehicle.

This warranty commences on the date the lift is put in service, providing the warranty registration card is completed and received by The Braun Corporation within 20 days of purchase.

This warranty also covers the cost of labor for the repair or replacement of most parts for one year when performed by an authorized Braun Representative. (A Braun labor schedule determines cost allowance for repairs.)

This warranty does not cover normal maintenance, service, or periodic adjustments necessitated by use or wear. The Braun Corporation will not, under any circumstances, pay for loss of use of lift or vehicle in which it is installed or loss of time.

This warranty will become null and void if the lift has been damaged through accident, misuse, or neglect, or if the lift has been altered in any respect.



All illustrations, descriptions and specifications in this manual are based on the latest product information available at the time of publication. The Braun Corporation reserves the right to make changes at any time without notice.